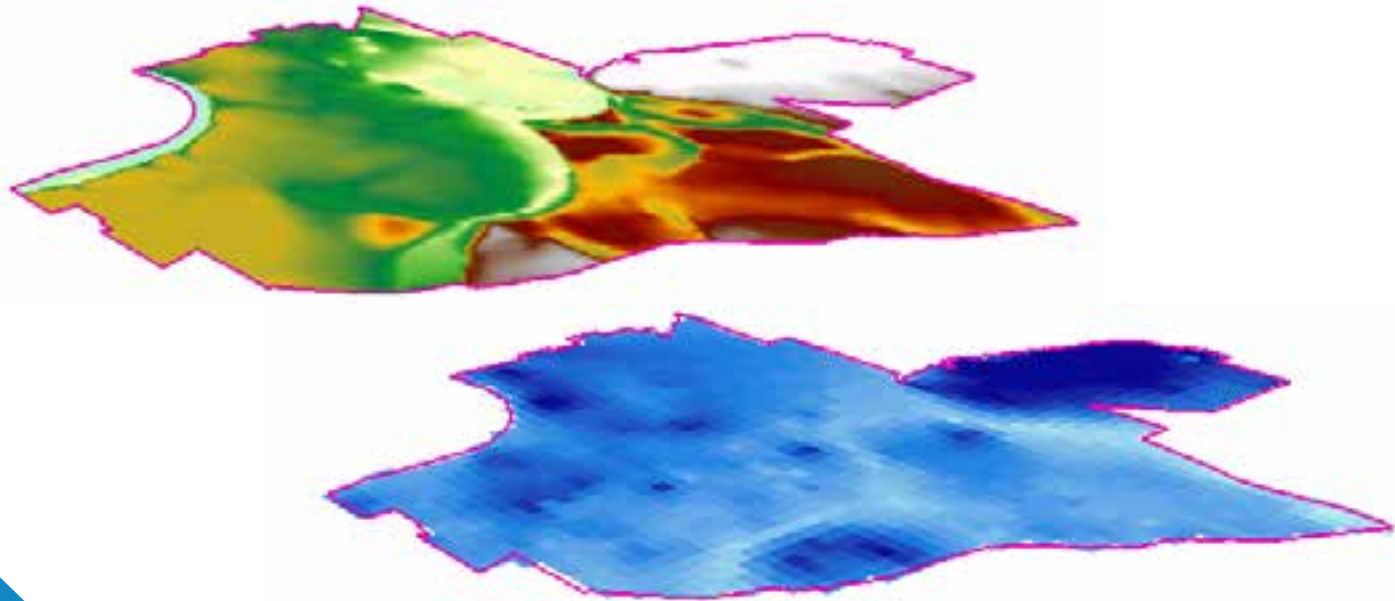


Doing More with Less

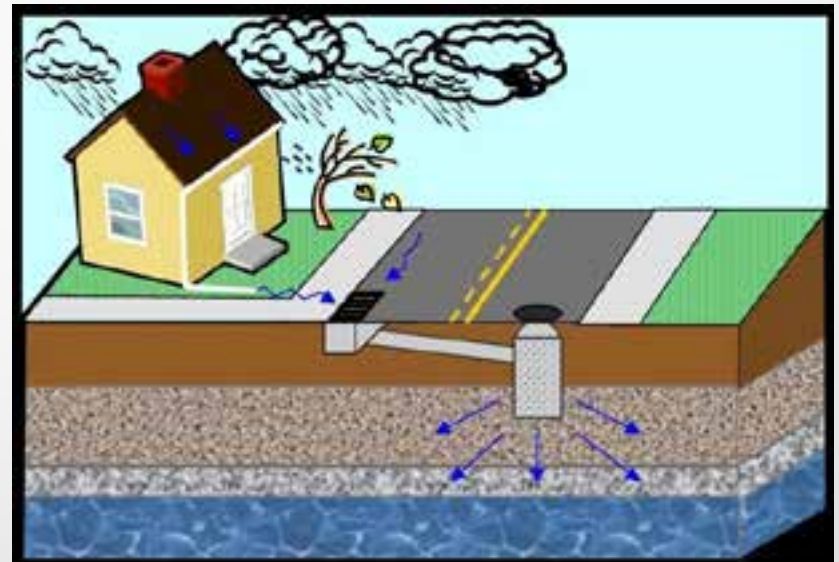
Developing a Groundwater Elevation Model



Billy Johnson

UIC Regulatory Overview

- What is a UIC?
- Federal Safe Drinking Water Act
- Federal Code and State Administrative Rules
- Relationship to Groundwater
- Protectiveness Demonstration

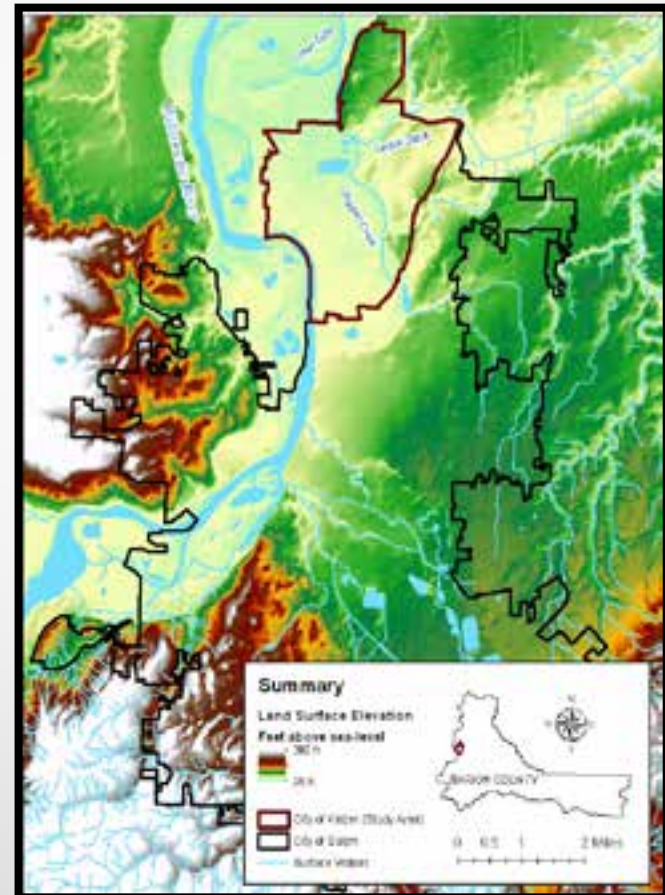


Agency GIS Background

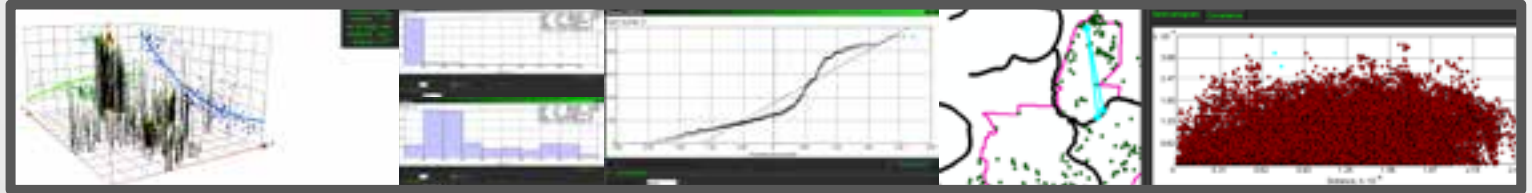
- Data acquisition and asset management
- Discovering outside data
- Basic map creation, analysis and growth
- Project development using current tools and trial extensions

Groundwater Elevation Model

- Overview and focus area
- Primary data-sets
- Establishing resources
- Review



GW Elevation Model - Data Analysis



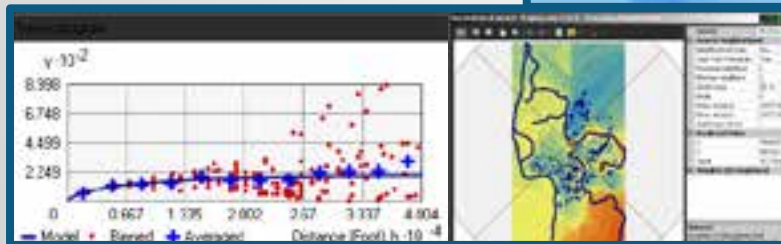
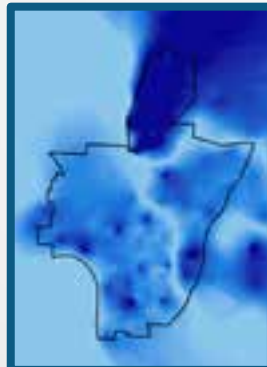
- ArcGIS Resource Center's *Classification Trees of Interpolation Methods*
- *Exploring Spatial Data Analysis* tool
- ArcGIS Geostatistical Analyst tool
- Visual and Statistical Analysis
- Summary



GW Elevation Model - Surface Creation

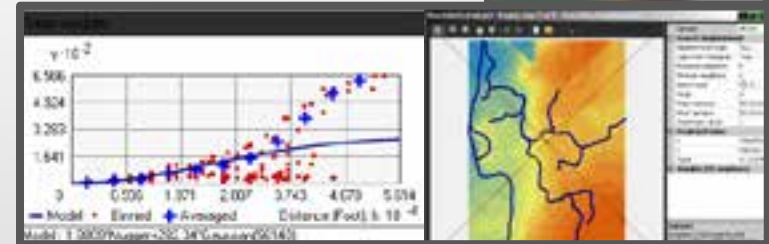
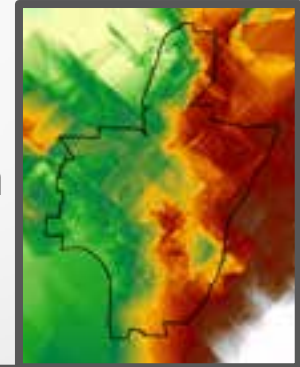
Depth to Ground Water:

- Statistical function
- Averaging restrictions



Water Table Elevation:

- Statistical function
- Averaging restrictions



GW Elevation Model – Averaging & Application

- Evaluation of created surfaces
- Conclusion and protectiveness

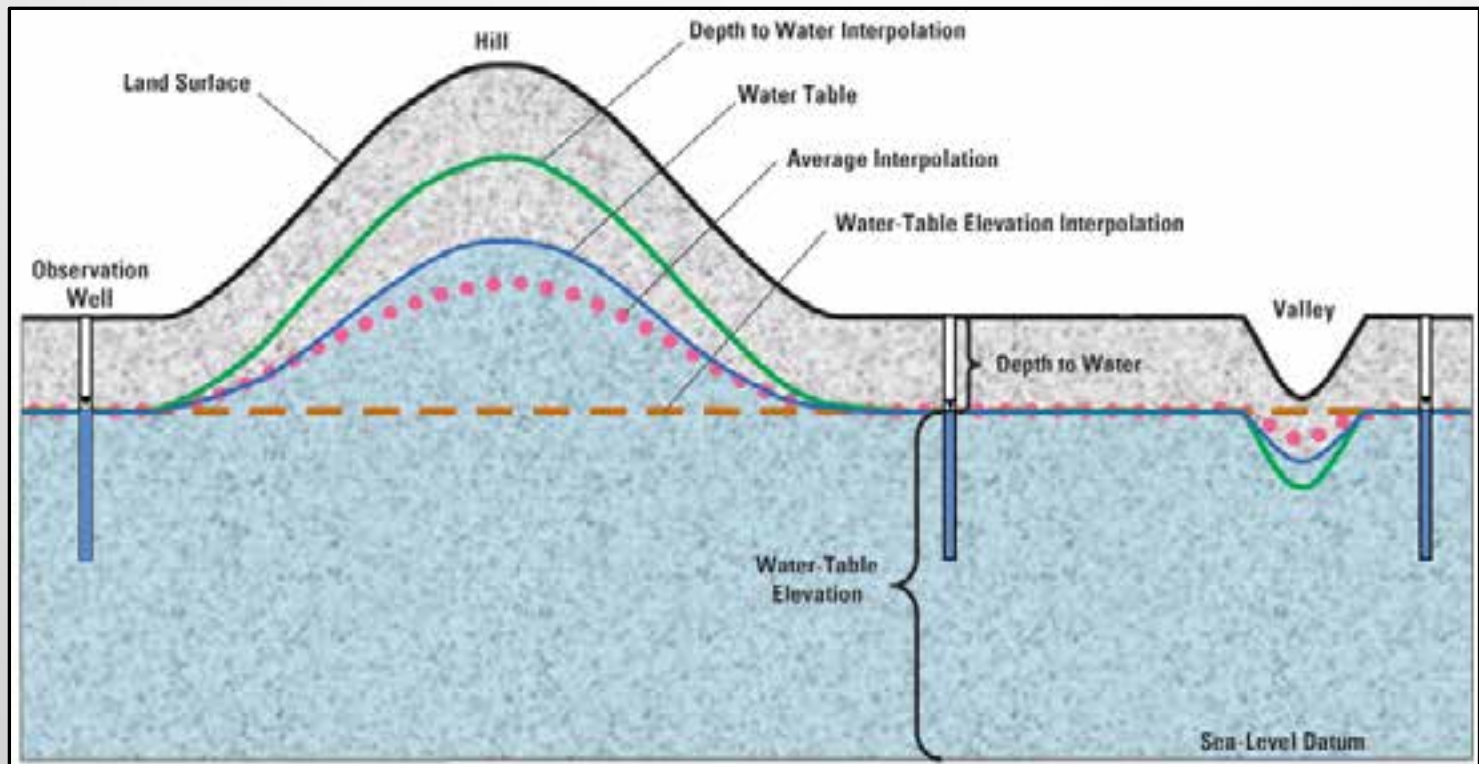


Figure 8. Snyder, D.T., 2008, Estimated depth to ground water and configuration of the water table in the Portland, Oregon area: U.S. Geological Survey Scientific Investigations Report 2008-5059, 40 p. (Available at <http://pubs.usgs.gov/sir/2008/5059/>)

Questions?

Contact Information:

Billy Johnson

johnsonb@Keizer.org

503-856-3424

